(43) International Publication Date 3 June 2004 (03.06.2004)

PCT

(10) International Publication Number WO 2004/046154 A1

(51) International Patent Classification7:

C07D 501/06,

(21) International Application Number:

PCT/IB2003/005032

(22) International Filing Date:

10 November 2003 (10.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

15 November 2002 (15.11.2002) 848/MAS/2002 152/MAS/2003 26 February 2003 (26.02.2003)

(71) Applicant (for all designated States except US): OR-CHID CHEMICALS & PHARMACEUTICALS LTD [IN/IN]; Orchid Towers,, 313, Valluvar Kottam High Road, Nungambakkam, Chennai 600 034 (IN).

- (72) Inventors: and
- (75) Inventors/Applicants (for US only): DESHPANDE, Pandurang, Balwant [IN/IN]; C-1 "CEEBROS", Plot No. 32 (New) 1st Avenue, Indira nagar, Chennai 600 020 (IN) KHADANGALE, Bhausaheb, Pandharinath [IN/IN]; Santhi Avenue, No. 7,, Dr. Radhakrishnan Road, Thiruvanmiyur, Chennai 600 042 (IN). RAMASUBBU. Chandrasekaran [IN/IN]; No. 3 (New No.7) B1, Rammiyam Foundation, 7th Main Road, Dhandeeswarnagar, Velachery, Chennai 600 042 (IN).
- (74) Common Representative: ORCHID CHEMICALS & PHARMACEUTICALS LTD; c/o Padmaja, S., Orchid Towers, 313, Valluvar Kottam High Road, Nungambakkam, Chennai 600034 (IN).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,

[Continued on next page]

(54) Title: NOVEL AMORPHOUS HYDRATE OF A CEPHALOSPORIN ANTIBIOTIC

(57) Abstract: A process for the preparation of cefdinir of the formula (I) the said process comprising the steps of :i) condensing 7-amino-3-cephem-4-carboxylic acid of the formula (XII) wherein R1 is as defined above with compound of the formula (XIII) in the presence of a tertiary amine and an organic solvent, followed by treatment with a base to produce a salt of compound formula (XIV), wherein M+ is a counter ion and ii) hydrolyzing the compound of the formula (XTV) using an acid in the presence of a solvent to produce cefdinir of formula (I).

